REMARKS

Claims 1-8, 19-26, 37, 38, 43, and 44 are in the application, with Claims 1, 2, 5-8, 19, 20, 23-26, 37, 38, 43 and 44 having been amended. Claims 1, 7, 19, 25, 37 and 43 are the independent claims herein. No new matter has been added. Reconsideration and further examination are respectfully requested.

I. Claim Rejections Under 35 USC § 101

The Examiner rejected claims 1-8, 37, 38, 43 and 44 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Specifically, the Examiner concluded that claims 1-8, 37, 38, 43 and 44 are not within the technological arts. Applicant respectfully submits that the Examiner's rejection is not consistent with the plain meaning of section 101 and is contrary to the binding decisions of the United States Court of Appeals for the Federal Circuit.[1]

The claims at issue are concerned with routing securities orders to, or allocating securities orders among, securities exchanges or ECNs. More particularly, the instant invention relates to a method, software program, and system for routing or allocating securities orders based on securities exchange or ECN attributes other than price, size of order or response time. It appears that the Examiner explicitly concedes that the claimed subject matter produces a useful, concrete and tangible result. Instead, the Examiner focuses solely on the alleged "technological arts" requirement.

A. The Examiner's Rejection Is Inconsistent with the Plain Text of § 101

A proper analysis of whether a claim is directed to statutory subject matter begins with the language of 35 U.S.C. § 101, which states:

> Whoever invents or discovers any new and useful[2] process, machine, manufacturer, or composition of matter, or any new and

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[1] There is no doubt that the Examiner was required to follow the precedents of the Federal Circuit in interpreting § 101. See Manual of Patent Examining Procedure § 2106 (Rev. 2, May 2004.)

[2] "Useful" is defined as: "capable of being put to use: serviceable; esp.: having utility." Webster's New Collegiate Dictionary p. 1279 (1973); Diamond v. Chakrabarty, 447 U.S. 303, 308 (1980) (words in § 101 should be given their "ordinary, contemporary, common meaning").

> useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In 1981, the United States Supreme Court re-established the broad scope of section 101 in Diamond v. Diehr, 450 U.S. 175. Diehr began its analysis by returning to first principles, noting that, in cases of statutory construction, the Court must first look to the language of the statute. Id. at 182. The Court then noted the broad language of section 101, which contains a simple, concise legislative mandate that a patent may issue for "any new and useful process, machine, manufacture or composition of matter." Id. See also State Street Bank & Trust Company v. Signature Financial Group, Inc., 149 F. 3d 1368, 1373 (Fed. Cir. 1998) ("The repetitive use of the expansive term "any" in § 101 shows Congress's intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in § 101.") Indeed, in construing the broad nature of the statue, the Supreme Court had observed a year earlier that Congress intended section 101 to include "anything under the sun that is made by man." Chakrabarty, 447 U.S. at 308 quoting S. Rep. No. 1979, 82d Cong. 2d. Sess., 5 (1952); H.R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952). The Chakrabarty Court also recognized in construing § 101 that "'unless otherwise defined, words will be interpreting as taking their ordinary, contemporary, common meaning.'" Id. (quoting Perrin v. United States, 444 U.S. 37, 42 (1979)). Moreover, the Supreme Court issued an express warning that the Examiner here explicitly violated: "[I]n dealing with the patent laws, we have more than once cautioned that 'courts should not read into the patent laws limitations and conditions which the legislature has not expressed.'" Diehr, 450 U.S. at 182 (quoting Chakrabarty, 447 U.S. at 308).

After reviewing the broad language of the statute, the Diehr court recognized that only "laws of nature, natural phenomena, and abstract ideas" are excluded from patentability under section 101. 450 U.S. at 185. The Court explained the rationale behind the narrow limitation:

> "[A] new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law that $E=mc^2$ nor could Newton have patented the law of gravity. Such discoveries are manifestations of ...nature, free to all men and reserved exclusively to none."

Id. (quoting Chakrabarty, 447 U.S. at 309).

In applying that rationale to mathematics, the Court recognized that a mathematical formula may describe a law of nature, a scientific truth, or an abstract idea. Importantly, the

Court also recognized that mathematics may be used to describe steps of a statutory method or elements of a statutory apparatus. Id. at 188; see also Arrhythmia Research Technology, Inc. v. Corazonix Corp., 958 F.2d 1053, 1056 (Fed. Cir. 1993). The crucial distinction is whether the mathematical formula is being claimed in the abstract or is being applied in the claim, when viewed as a whole, to create an invention of the type set forth in 35 U.S.C. § 101. Diehr, 450 U.S. at 192; see also In re Alappat, 33 F. 3d 1526, 1543 (Fed. Cir. 1994) (en banc), Arrhythmia, 958 F.2d at 1057 (quoting In re Meyer, 688 F.2d 789, 795 (CCPA 1982)).

The mathematical algorithm in Diehr was the known Arrhenius equation. The Court held that when the algorithm was incorporated in a useful process, curing rubber, the subject matter was statutory. In reaching that conclusion, the Court treated mathematics like any other basic principle: while a basic principle is not patentable, a new and useful structure created with the aid of that principle is.[3]

Measured against the plain text of § 101 and the fundamental teachings of Diehr, the claims at issue are clearly directed to statutory subject matter. One cannot equate a method for routing or allocating securities orders with a law of nature or a natural phenomenon. Further, while the claimed invention utilizes mathematics and financial principles to obtain favorable securities trading results, the invention is applying these principles to solve a particular problem in a tangible, concrete and useful manner.

The fundamental concepts re-established in Diehr reveal that the Examiner's rejection is inappropriate. First, the rejection fails to follow the plain text of section 101. Section 101 unambiguously applies to any new and useful process. 35 U.S.C. § 101.[4] Nevertheless, the Examiner concluded that a new and useful process is only patentable subject matter if the process has some undefined connection to the "technological arts." Simply put, "any new and useful process" in section 101 does not mean, under the Examiner's analysis, "any new and

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[3] The Supreme Court in Chakrabarty recognized the distinction between abstract and applied principles. Just as a combination of chemical re-agents that interact and react in accordance with the principles of chemistry does not become non-statutory because those interactions and reactions follow basic principles, neither does a process claim that is specifically configured to obtain favorable results in securities trading. In both situations, fundamental principles are being applied to obtain a useful result.

[4] "Process" is defined in 35 U.S.C. § 100(b) to encompass: "[a] process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter or material."

useful process." Rather, the Examiner has added an extra requirement that is not justified by the plain language of the statute. Diehr, 450 U.S. at 182 ("'courts should not read into the patent laws limitations and conditions which the legislature has not expressed.'"); Alappat, 33 F.3d at 1582 (Rader, J. concurring) ("Section 101 does not suggest that patent protection extends to some subcategories of processes or machines and not to others. The Act simply does not extend coverage to some new and useful inventions and deny it to others.").

B. The Examiner's Rejection Cannot Be Reconciled With Recent Decisions of the Federal Circuit

In addition to running afoul of the plain text of the statute, the Examiner's rejection ignores the fundamental teachings of the Federal Circuit regarding the scope of section 101. When those binding precedents are applied to the claims at issue, it is clear that they are directed to statutory subject matter.

The first such case is State Street. The claimed invention in State Street involved the application of a mathematical algorithm to manage a new form of financial structure. The District Court had applied two judicially-created exceptions – the mathematical algorithm exception and the business method exception – in finding the claims were not directed to statutory subject matter. The Federal Circuit reversed. As for the presence of a mathematical algorithm, the Court stated:

> Unpatentable mathematical algorithms are identifiable by showing they are merely abstract ideas constituting disembodied concepts or truths that are not "useful." From a practical standpoint, this means that to be patentable an algorithm must be applied in a "useful" way. In Alappat, we held that data, transformed by a machine through a series of mathematical calculations to produce a smooth waveform display on a rasterizer monitor, constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it produced "a useful, concrete and tangible result" – the smooth waveform.
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> Similarly, in Arrhythmia Research Technology Inc. v. Corazonix Corp., 958 F.2d 1053, 22 USPQ2d 1033 (Fed. Cir. 1992), we held that the transformation of electrocardiograph signals from a patient's heartbeat by a machine through a series of mathematical calculations constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it

> corresponded to a useful, concrete or tangible thing – the condition of a patient's heart.
>
> Today, we hold that the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces "a useful, concrete and tangible result" – a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.

State Street, 149 F.3d at 1373.

Several aspects of this explicit holding highlight the bases of the Examiner's error. First, the State Street Court properly focused the § 101 analysis not on whether an algorithm was present but on whether the algorithm was being applied to produce a "useful, concrete and tangible result." If such a result is produced, the claimed invention is not an abstract idea and the § 101 test is satisfied. Second, the Federal Circuit expressly held that the calculation of a share price for use in managing a financial structure produces "a useful, concrete and tangible result." Id. Unless there is some principled distinction between an apparatus claim – such as at issue in State Street – and a process claim – such as at issue here – determining whether to route an order by means of a process should be statutory subject matter. Put differently, if the result obtained by a machine is useful, concrete and tangible, the only logical conclusion is that a process obtaining the same result is as well.

The Federal Circuit also made clear that the holding in State Street is not somehow limited to machine claims:

> The question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to – process, machine, manufacture, or composition of matter – but rather on the essential characteristics of the subject matter, in particular, its practical utility . . . For purposes of our analysis, as noted above, claim 1 is directed to a machine programmed with . . . software and admittedly produces a "useful, concrete, and tangible result." This renders it statutory subject matter, even if the useful result is expressed in numbers, such as price, profit, percentage, cost, or loss.

Id. 1375 (emphasis in original) (internal citations omitted). The Examiner's rejection directly violates the above precedent. Under the Examiner's analysis, a machine claim that

covers routing or allocation of securities orders is patentable subject matter while a process claim is not. Both inventions, however, produce the same result and have the same practical utility. Only by focusing on which of the four categories of subject matter the claim is directed to – machine or process – can the Examiner approve one claim and reject another. This approach, however, was specifically proscribed by the Federal Circuit in State Street.

State Street also emphatically rejected the District Court's business method rejection stating "we take this opportunity to lay this ill-conceived exception to rest." Id. at 1375. As the Court explained: "Since the 1952 Patent Act, business methods have been, and should have been, subject to the same legal requirements for patentability as applied to any other process or method." Id.[5] Consequently, the fact that the claims at issue are utilized to route or allocate securities orders (a business method) should play no role in the § 101 analysis. Rather, the focus should be on whether the claimed method produces a useful, concrete and tangible result.

The Examiner's failure to follow the reasoning of State Street combined with his failure to cite authorities in support of the rejection leads to one inevitable conclusion: the Examiner is attempting to resurrect the business method exception discredited in State Street under another name. Such a tactic is inappropriate, runs afoul of the Examiner's requirement to follow Federal Circuit precedent and renders the Examiner's rejection arbitrary and capricious.

If there was any doubt about the scope of § 101 after State Street and its application to process claims, such doubt should have been laid to rest in AT&T Corp. v. Excel Communications, Inc. 172 F. 3d 1352 (Fed. Cir. 1999). The AT&T court explicitly applied the logic of State Street to a pure method claim.

The invention at issue in AT&T involved method claims designed to operate a telecommunications system with multiple long-distance service providers. Id. at 1353. More specifically, the invention describes a message record for long-distance telephone calls that is enhanced by adding a primary interexchange carrier ("PIC") indicator. Id. While the claims included both method and apparatus claims, only the method claims were asserted against Excel. The District Court concluded that the claims ran afoul of the mathematical exception to

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[5] Judge Rich authored the Opinion in State Street. His view of the intent of the 1952 Act should be given considerable weight as he was one of its primary authors.

patentable subject matter and that the only physical step in the claims involved data-gathering for the algorithm. Id. at 1355.

The Federal Circuit rejected a narrow reading of section 101 and broadly interpreted State Street in reversing the District Court. The AT&T Court, like the Court in State Street, began its analysis by examining the broad language of the statute. Id. The court then focused on the presence of a mathematical algorithm:

> The State Street formulation, that a mathematical algorithm may be an integral part of patentable subject matter such as a machine or process if the claimed invention as a whole is applied in a "useful" manner, follows the approach taken by this Court en banc in In re Alappat, 33 F.3d 1526, 31 USPQ 2d 1545 (Fed. Cir. 1994). In Alappat, we set out our understanding of the Supreme Court's limitations on the patentability of mathematical subject matter and concluded that:
>
> > [The Court] never intended to create an overly broad, fourth category of [mathematical] subject matter excluded from § 101. Rather, at the core of the Court's analysis . . . lies an attempt by the Court to explain a rather straightforward concept, namely that certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application and thus that subject matter is not, in and of itself, entitled to patent protection.
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> Id. at 1543, 31 USPQ 2d at 1556-57 (emphasis added). Thus, the Alappat inquiry simply requires an examination of the contested claims to see if the claimed subject matter as a whole is disembodied mathematical concept representing nothing more than a "law of nature" or an "abstract idea," or if the mathematical concept has been reduced to some practical application rendering it "useful".

172 F. 3d at 1357.

Tellingly, the Examiner did not follow the approach set out above. Rather, the Examiner focused on the nature of the subject matter claimed to conclude that application of mathematics or logic to produce a useful result is not enough to render a claim statutory subject matter where a process is involved instead of a machine. Again, the Examiner's approach is driven entirely by the nature of the subject matter and not its functional utility.

The AT&T Court directly rejected this approach:

> In both Alappat and State Street, the claim was for a machine that achieved certain results. In the case before us, because Excel does not own or operate the facilities over which its calls are placed, AT&T did not charge Excel with infringement of its apparatus claims, but limited its infringement charge to the specified method or process claims. Whether stated implicitly or explicitly, we consider the scope of § 101 to be the same regardless of the form-machine or process-in which a particular claim is drafted. See e.g. In re Alappat, 33 F.3d at 1581, 31 USPQ 2d at 1589 (Rader, J. concurring) ("Judge Rich, with whom I fully concur, reads Alappat's application as claiming a machine. In fact, whether the invention is a process or a machine is irrelevant. The language of the Patent Act itself, as well as Supreme Court rulings, clarifies that Alappat's invention fits comfortably within 35 U.S.C. § 101 whether viewed as a process or a machine."); State Street 149 F.3d at 1372; 47 USPQ 2d at 1600 ("[f]or the purposes of a § 101 analysis, it is of little relevance whether claim 1 is directed to a 'machine' or a 'process' . . .") Furthermore, the Supreme Court's decisions in Diehr, Benson, and Flook, all of which involved method (i.e., process) claims, have provided and supported the principles which we apply to both machine and process-type claims. Thus, we are comfortable in applying our reasoning in Alappat and State Street to the method claims at issue in this case.

Id. at 1357-58.

When that reasoning was applied to the process claims at issue in AT&T, the Federal Circuit easily concluded that the claims were statutory. Indeed, the reasoning applied in AT&T is directly relevant to understanding the Examiner's error:

> In this case, Excel argues, correctly, that the PIC indicator value is derived using a simple mathematical principle (p and q). But that is not determinative because AT&T does not claim the Boolean principle as such or attempt to forestall its use in any other application. It is clear from the written description of the '184 patent that AT&T is only claiming a process in order to determine the value of the PIC indicator. The PIC indicator represents information about the call recipient's PIC, a useful, non-abstract result that facilitates differential billing of long-distance calls . . . . Because the claimed process applies the Boolean principle to produce a useful, concrete, tangible result without preempting other uses of the mathematical principle, on its face the claimed process comfortably falls within the scope of § 101.

Id. at 1588.

Here, the fact that the claimed invention does not apply principles of "physical science" is not the issue. Instead, the Examiner should have focused on whether the concepts of the invention are being applied to produce a useful concrete and tangible result. If he had followed the proper approach, he too would have concluded that the claimed process falls comfortably within the scope of § 101.

Additionally, the AT&T Court rejected Excel's arguments that the method claims were not statutory because there was no "physical transformation" and the claims lacked any physical limitations. Id. at 1359. In doing so, the Court distinguished earlier decisions that did not focus on "the ultimate issue" – whether the claim as a whole is directed to statutory subject matter by examining whether the method produces a useful, concrete and tangible result. Id.

One example is particularly helpful in understanding a proper vs. improper § 101 analysis. Again, the Federal Circuit explained it clearly:

> [I]n In re Grams, the Court applied the Freeman-Walter-Abele test and concluded that the only physical step in the claimed process involved data-gathering; thus, the claims were held to be directed to unpatentable subject matter. See 888 F.2d 835, 839, 12 USPQ 2d 1824, 1829 (Fed. Cir. 1989). In contrast, our inquiry here focuses on whether the mathematical algorithm is applied in a practical manner to produce a useful result. In re Grams is unhelpful because the panel in that case did not ascertain if the end result of the claimed process was useful, concrete and tangible.

Id. at 1360.

The Examiner's rejection runs directly afoul of the Federal Circuit's reasoning. As the Examiner himself concedes, the claimed method produces a useful, concrete and tangible result. This is all that a proper analysis under § 101 requires for subject matter to be held statutory.

C. The Examiner's "Technological Arts" Requirement Is Not Supported by the Act or the Relevant Case Law

Rather than following the Federal Circuit's recent authority regarding § 101, the Examiner asserts what he calls a "two-prong" test. He states that "[f]or a claimed invention to be statutory, the claimed invention must be within the "technological arts." However, the Examiner fails to cite any authority in support of this alleged test, which is contrary to the recent and controlling Federal Circuit opinions. (It would be particularly helpful if the Examiner would cite the relevant portion of the MPEP. Applicants have looked through the MPEP and can find no reference therein to a "technological arts" requirement.)

As an initial matter, neither State Street nor AT&T acknowledge that or even discuss that such a two-prong test exists.[6] Instead, both cases teach that machine and process claims should be subject to one standard on the 101 question – do the claims produce a useful, concrete and tangible result. If the Examiner's two prong test were the standard, one would expect to see some attempt by the Court in AT&T to determine if the pure method claims at issue passed such a crucial test. In fact, there is no such discussion.

At a more fundamental level, the underlying analysis behind the Examiner's alleged "technological arts" requirement is flawed. Neither § 101 nor Article I, § 8, cl. 8 of the United States Constitution limit patents to the "technological arts" as the Examiner contends. Rather, both explicitly refer to the "useful" arts. It is clear from recent precedents that the correct focus is on determining whether the claimed invention is useful or abstract. The Examiner misses this essential point and, therefore, reaches the wrong conclusion.

A simple example drawn from the claims at issue illustrates why the Examiner's approach is both flawed and unworkable. If the claims at issue recited that a computer is used to make a determination or that some other mechanical device is utilized in conjunction with a particular step in the method, the claim would be statutory under the Examiner's approach (as the Examiner apparently concedes by not rejecting claims 19-26 under § 101). The steps of the claim, however, would be the same as would the claim's functional utility. See Cochrane v. Deener, 94 U.S. 780, 787 (1877) ("That a process may be patentable, irrespective of the

particular form of the instrumentalities used, cannot be disputed."); AT&T, 172 F.3d at 1359 ("Excel also contends that because the process claims at issue lack physical limitations set forth in the patent, the claims are not patentable subject matter. This argument reflects a misunderstanding of our case law. . . . Since the claims at issue in this case are directed to a process in the first instance, a structural inquiry is unnecessary.").

Moreover, the Examiner does not articulate the relationship that technology must have to the claims to render them statutory. Here, the steps involve determining attributes of a securities exchange or ECN and determining how to route or allocate a securities order. Those steps clearly exist in the physical world and are not dependent upon aesthetic, emotional or normative reactions of a human actor. Further, there is no question that the steps will be carried out utilizing technology (i.e. a computer, a word processor, etc.). In this respect, the process at issue is no different than a surgical method or a process to mill flour: the technological instruments involved are known and of little matter. In such a case, the focus should be on whether the process is abstract or whether the process produces a useful, concrete or tangible result – not on whether the underlying technology in carrying out the steps happens to be mentioned.

In fact, the Examiner's entire approach fails to account for the nature of a process. A "process" differs fundamentally from the other three classes (machine, manufacture and composition of matter), in that a process is not a structural entity but rather a series of steps leading to a useful result. See Mehl/Biophile International Corp. v. Milgraum, 8 F. Supp. 2d 434, 446, 47 USPQ 2d 1248, 1257 (D.N.J. 1998), aff'd, 192 F. 3d 1362, 52 USPQ 2d 1303 (Fed. Cir. 1999); Ex parte Murray, 9 USPQ 2d 1819, 1820 (Bd. Pat. App. & Int'f. 1988) ("a series of steps is a "process" within the meaning of § 101 unless it falls within a judicially determined category of nonstatutory subject matter exceptions."). The claims at issue clearly constitute a series of steps leading to a useful result – namely how to route or allocate a securities order. Indeed, the Examiner seems to concede this point. Unless the claims fall into one of the three exceptions – natural phenomenon, law of nature or abstract idea – the claims are statutory.

In any event, and as the Examiner recognizes, a process for routing or allocating a securities order is not an abstraction. The real world benefits of such a process are no less useful because they are felt on Wall Street rather than Main Street. As the Supreme Court recognized long ago: "The Act embodied Jefferson's philosophy that 'ingenuity should receive a liberal

encouragement.'" Chakrabarty, 447 U.S. at 308-09 (quoting 5 Writings of Thomas Jefferson, at 75-76). For this reason, § 101 is broadly drafted to include "anything under the sun that is made by man." Id. The Examiner seems to have lost sight of these basic tenets and, therefore, the rejection under § 101 should be reconsidered and withdrawn.

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Moreover, with respect to claims 37, 38, 43 and 44, now amended to explicitly state that the steps recited therein are "processor-executable", it is not seen how such steps, stored in a medium, could be executed by pencil and paper.

II. Claim Rejections Under 35 USC § 103

Claims 1-8, 19-26, 37, 38, 43, and 44 are rejected as being unpatentable over either Waelbroeck et al. patent publication U.S. 2002/0010672 (Waelbroeck '672) or Waelbroeck et al. patent publication U.S. 2002/0052827 (Waelbroeck '827).

Claim 1, as now amended, is directed to a "method" which includes "determining during a trading session an attribute of a securities exchange or ECN". Claim 1 specifies that the determined attribute is not any one of: "a quoted security price, an order size and an average response time". The method recited in claim 1 further includes "determining during the trading session, based at least in part on the determined attribute, at least one of: (a) whether to route an order to the securities exchange or ECN, and (b) a proportion of the order to allocate to the securities exchange or ECN".

Support for the amendment that an attribute of a securities exchange or ECN is determined is found at page 1, line 19 to page 2, line 19 and particularly at page 2, lines 3-4. The term "ECN" is a term of art that is well known to those of ordinary skill in the art, and as explained at page 1, lines 11-13, refers to private electronic networks that allow for placement of securities trading orders and that are fully automated to match orders and set prices for trades without the intervention of market makers.

As now presented, the claim 1 is directed to routing an order or allocating a portion of an order to a securities exchange or ECN. By contrast, the system disclosed in the Waelbroeck

references is concerned with exchanging information with and/or routing orders to direct counter-parties for securities trades, and not with routing orders to a trading forum such as a securities exchange or an ECN. For example, the process disclosed in FIG. 5 of Waelbroeck '672 and discussed in paragraph [0063] thereof includes ranking market participants and routing an order directly to the highest ranked market participant. As defined at paragraph [0004] of Waelbroeck '672, "market participant" refers to an entity that may directly participate in a trade, and does not include a securities exchange or ECN.

One of ordinary skill in the art would be instructed by the Waelbroeck references on techniques for qualifying and routing orders to direct trading partners, but would not generally be guided by the references with respect to the subject matter of the present invention, which is concerned with how to route or allocate orders to a securities exchange or ECN. To the extent that Waelbroeck '672 obliquely refers to other systems for routing orders to an ECN (see, e.g., paragraph [0062]), the prior art disclosed in Waelbroeck '672 does not encompass making a routing/allocation determination based on a securities exchange/ECN attribute other than quoted price, order size or response time. It is therefore respectfully submitted that claim 1, as now presented, is patentably distinguished from the Waelbroeck references.

Claims 2-6 are dependent on claim 1 and are submitted as patentable on the same basis as claim 1. Further, claim 6 lists a group of securities exchange/ECN attributes from which the attribute referred to in claim 1 may be selected. It is submitted that the prior art does not teach or suggest using any one of the listed attributes as a basis for routing/allocating an order. More specifically:

(1) The Waelbroeck references do not disclose routing/allocating an order based on the percentage of total market volume in a security handled by a securities exchange/ECN;

(2) The Waelbroeck references do not disclose routing/allocating an order based on a degree to which a securities exchange/ECN is overfilling orders for a security;

(3) The Waelbroeck references do not disclose routing/allocating an order based on an average amount of time that a securities exchange/ECN offered a best price for a security;

(4) The Waelbroeck references do not disclose routing/allocating an order based on a percentage of a trading session during which a securities exchange/ECN offered a best price for a security;

(5) The Waelbroeck references do not disclose routing/allocating an order based on a number of times during a trading session that a securities exchange/ECN offered a best price for a security; and

(6) The Waelbroeck references do not disclose routing/allocating an order based on an average amount of time required for a securities exchange/ECN to match a best price offered for a security.

Accordingly, the references relied upon by the Examiner do not discuss any one of the attributes listed in claim 6, and it is therefore believed that claim 6 is patentable on grounds independent of the patentability of its parent claim 1.

Claims 19 and 37 have been amended in the same manner as claim 1 and are submitted as patentable on the same basis as claim 1, together with their independent claims. Moreover, the remarks made above with respect to claim 6 are also applicable to independent claims 7, 25 and 43, and their dependent claims. It is therefore submitted that patentability of all of the pending claims has now been established.

CONCLUSION

Accordingly, Applicants respectfully request allowance of the pending claims. If any issues remain, or if the Examiner has any further suggestions for expediting allowance of the present application, the Examiner is kindly invited to contact the undersigned via telephone at (203) 972-3460.

Respectfully submitted,

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Date

Nathaniel Levin
Registration No. 34,860
Buckley, Maschoff & Talwalkar LLC
Five Elm Street
New Canaan, CT 06840
(203) 972-3460